Zhou

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/601,561

DATE: 05/24/2001
TIME: 13:38:27

Input Set : A:\Nih332-1.app
Output Set: C:\CRF3\05242001\I601561.raw

ENTERED

```
      3 <110> APPLICANT: Schneider, Thomas D.
      4       Hengen, Paul N.
      5       The Government of the United States of America
      6       as represented by The Secretary of the
      7       Department of Health and Human Services
      9 <120> TITLE OF INVENTION: Molecular Computing Elements: Gates and Flip-Flops
     11 <130> FILE REFERENCE: 015280-332100US
     13 <140> CURRENT APPLICATION NUMBER: US 09/601,561
C--> 14 <141> CURRENT FILING DATE: 2001-05-14
     16 <150> PRIOR APPLICATION NUMBER: US 60/075,468
     17 <151> PRIOR FILING DATE: 1998-02-20
     19 <150> PRIOR APPLICATION NUMBER: WO PCT/US99/03469
     20 <151> PRIOR FILING DATE: 1999-02-17
     22 <160> NUMBER OF SEQ ID NOS: 19
     24 <170> SOFTWARE: PatentIn Ver. 2.1
     26 <210> SEQ ID NO: 1
     27 <211> LENGTH: 20
     28 <212> TYPE: DNA
     29 <213> ORGANISM: Artificial Sequence
     31 <220> FEATURE:
     32 <223> OTHER INFORMATION: Description of Artificial Sequence:consensus
     33       sequence of early model of Factor for Inversion
     34       Stimulation (Fis) binding site
     36 <400> SEQUENCE: 1
     37 ttgstcaaaa tttgascaaa                                              20
     40 <210> SEQ ID NO: 2
     41 <211> LENGTH: 42
     42 <212> TYPE: DNA
     43 <213> ORGANISM: Artificial Sequence
     45 <220> FEATURE:
     46 <223> OTHER INFORMATION: Description of Artificial Sequence:paired Factor
     47       for Inversion Stimulation (Fis) binding sites with
     48       11 bp spacing; overlap 11
     50 <400> SEQUENCE: 2
     51 tattctttgc tcaaaatttg atcaaatttt gagcaaagaa ta                     42
     54 <210> SEQ ID NO: 3
     55 <211> LENGTH: 38
     56 <212> TYPE: DNA
     57 <213> ORGANISM: Artificial Sequence
     59 <220> FEATURE:
     60 <223> OTHER INFORMATION: Description of Artificial Sequence:paired Factor
     61       for Inversion Stimulation (Fis) binding sites with
     62       7 bp spacing; overlap 7
     64 <400> SEQUENCE: 3
     65 aggcttttgc tcaaagttta aactttgagc aaaagcct                          38
     68 <210> SEQ ID NO: 4
     69 <211> LENGTH: 15
```

RAW SEQUENCE LISTING DATE: 05/24/2001
PATENT APPLICATION: US/09/601,561 TIME: 13:38:27

Input Set : A:\Nih332-1.app
Output Set: C:\CRF3\05242001\I601561.raw

<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence:sequence logo
for Factor for Inversion Stimulation (Fis) binding
site
<400> SEQUENCE: 4
gctcaaaatt tgatc 15
<210> SEQ ID NO: 5
<211> LENGTH: 58
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence:Factor for
Inversion Stimulation (Fis) binding sites
separated by 23 bp; separated 23
<400> SEQUENCE: 5
ggaattcttt gctcaaaatt tgatcaggat cctgatcaaa ttttgagcaa agaattcc 58
<210> SEQ ID NO: 6
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence:18.1 bit Fis
site
<400> SEQUENCE: 6
tttgctcaaa atttgatcaa a 21
<210> SEQ ID NO: 7
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence:18.1 bit Fis
site
<400> SEQUENCE: 7
tttgatcaaa ttttgagcaa a 21
<210> SEQ ID NO: 8
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: Description of Artificial Sequence:12.7 bit Fis
site
<400> SEQUENCE: 8
tttgctcaaa gtttaaactt t 21
<210> SEQ ID NO: 9
<211> LENGTH: 21
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING DATE: 05/24/2001
PATENT APPLICATION: US/09/601,561 TIME: 13:38:27

Input Set : A:\Nih332-1.app
Output Set: C:\CRF3\05242001\I601561.raw

```
140 <220> FEATURE:
141 <223> OTHER INFORMATION: Description of Artificial Sequence:12.7 bit Fis
142       site
144 <400> SEQUENCE: 9
145 aaagtttaaa ctttgagcaa a                                              21
148 <210> SEQ ID NO: 10
149 <211> LENGTH: 21
150 <212> TYPE: DNA
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Description of Artificial Sequence:15.0 bit Fis
155       site
157 <400> SEQUENCE: 10
158 tttgctcaaa atttgatcag g                                              21
161 <210> SEQ ID NO: 11
162 <211> LENGTH: 21
163 <212> TYPE: DNA
164 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: Description of Artificial Sequence:15.0 bit Fis
168       site
170 <400> SEQUENCE: 11
171 cctgatcaaa ttttgagcaa a                                              21
174 <210> SEQ ID NO: 12
175 <211> LENGTH: 46
176 <212> TYPE: DNA
177 <213> ORGANISM: Escherichia coli
179 <220> FEATURE:
180 <223> OTHER INFORMATION: origin of replication (oriC)
182 <400> SEQUENCE: 12
183 gttatacaca actcaaaaac tgaacaacag ttgttctttg gataac                    46
186 <210> SEQ ID NO: 13
187 <211> LENGTH: 15
188 <212> TYPE: DNA
189 <213> ORGANISM: Artificial Sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Description of Artificial Sequence:Fis site
193       separated by 11 bases; 9.1 bit Fis site
195 <400> SEQUENCE: 13
196 gaacaacagt tgttc                                                     15
199 <210> SEQ ID NO: 14
200 <211> LENGTH: 15
201 <212> TYPE: DNA
202 <213> ORGANISM: Artificial Sequence
204 <220> FEATURE:
205 <223> OTHER INFORMATION: Description of Artificial Sequence:Fis site
206       separated by 11 bases; 8.4 bit Fis site
208 <400> SEQUENCE: 14
209 actcaaaaac tgaac                                                     15
```

RAW SEQUENCE LISTING DATE: 05/24/2001
PATENT APPLICATION: US/09/601,561 TIME: 13:38:27

Input Set : A:\Nih332-1.app
Output Set: C:\CRF3\05242001\I601561.raw

212 <210> SEQ ID NO: 15
213 <211> LENGTH: 113
214 <212> TYPE: DNA
215 <213> ORGANISM: Artificial Sequence
217 <220> FEATURE:
218 <223> OTHER INFORMATION: Description of Artificial Sequence:synthesized
219 single very long nucleic acid with hairpin loop
220 DNA
222 <400> SEQUENCE: 15
223 aacgggatcc actcaaaaac tgaacaacag ttgttcgaat tcctcgagcg atcggcgaag 60
224 ccgatcgctc gaggaattcg aacaactgtt gttcagtttt tgagtggatc ccg 113
227 <210> SEQ ID NO: 16
228 <211> LENGTH: 21
229 <212> TYPE: DNA
230 <213> ORGANISM: Artificial Sequence
232 <220> FEATURE:
233 <223> OTHER INFORMATION: Description of Artificial Sequence:8.4 bit Fis
234 site
236 <400> SEQUENCE: 16
237 tccactcaaa aactgaacaa c 21
240 <210> SEQ ID NO: 17
241 <211> LENGTH: 21
242 <212> TYPE: DNA
243 <213> ORGANISM: Artificial Sequence
245 <220> FEATURE:
246 <223> OTHER INFORMATION: Description of Artificial Sequence:10.0 bit Fis
247 site
249 <400> SEQUENCE: 17
250 actgaacaac agttgttcga a 21
253 <210> SEQ ID NO: 18
254 <211> LENGTH: 21
255 <212> TYPE: DNA
256 <213> ORGANISM: Artificial Sequence
258 <220> FEATURE:
259 <223> OTHER INFORMATION: Description of Artificial Sequence:10.0 bit Fis
260 site
262 <400> SEQUENCE: 18
263 ttcgaacaac tgttgttcag t 21
266 <210> SEQ ID NO: 19
267 <211> LENGTH: 21
268 <212> TYPE: DNA
269 <213> ORGANISM: Artificial Sequence
271 <220> FEATURE:
272 <223> OTHER INFORMATION: Description of Artificial Sequence:8.4 bit Fis
273 site
275 <400> SEQUENCE: 19
276 gttgttcagt ttttgagtgg a 21

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/601,561

DATE: 05/24/2001
TIME: 13:38:28

Input Set : A:\Nih332-1.app
Output Set: C:\CRF3\05242001\I601561.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date